

OPERATIONAL AMPLIFIER FOR OPTICAL TRANSCEIVER

HU This application is a continuation of, and claims the benefit of, United States Patent U.S. patent No. 6,728,276 Application 10/285,203, entitled *SYSTEM FOR CONTROLLING BIAS CURRENT IN LASER DIODES WITH IMPROVED SWITCHING RATES*, filed October 30, 2002, and incorporated herein in its entirety by this reference.

BRIEF DESCRIPTION OF THE INVENTION

The present invention relates generally to semiconductor lasers, and particularly to operational amplifiers configured to switch semiconductor lasers on and off.

BACKGROUND OF THE INVENTION

Passive optical networks enable a plurality of optoelectronic transceivers to share one or more optical fibers while transmitting and receiving data in an optical form. Typically, passive optical networks employ a time division multiplexing access (TDMA) scheme to make this possible. In such schemes, the data transmission capabilities of the plurality of optoelectronic transceivers are operational only during separate, non-overlapping periods of time.

When the turn-on and turn-off times of the optoelectronic transceivers decrease, the amount of time available to each optoelectronic transceiver in a passive optical network to transmit optical data increases. Prior art optoelectronic transceivers are able to turn a laser diode on and off within 100 microseconds to 1 millisecond.

Persons skilled in the art, moreover, recognize that turning a laser diode on and off is a time consuming aspect of turning an optoelectronic transceiver on and off. Passive optical

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